Abstract
This article presents a summary of different ways of changing font styles in ConTeXt.

1 Introduction
The TUGboat editors recently invited me to write a regular column in TUGboat explaining some of the basic features of ConTeXt. This column is meant for ConTeXt beginners, and will explain how basic elements of ConTEXt work. I will explain it from the practicable point of view, that is, do this, and you will get this; to understand what is happening behind the scenes you need to read the ConTEXt manuals and the ConTEXt sources.

In this first installment, I will discuss how to use the various font styles in ConTEXt. Fonts are one of the most complicated parts of TeX. Fortunately, the macro developers take care of the dirty stuff, and most of the user interface is clean. Nevertheless, understanding the various options of the user interface can be intimidating. As a beginner, one does not want to know all the nitty-gritty details, but just the basic features. We hope to present these in this article.

In ConTEXt there are five ways to switch fonts:

1. font style ($\textmd{rm}$, $\textsc{ss}$, etc.),
2. font size ($\texttt{fa}$, $\texttt{fb}$, etc.),
3. alternative font style ($\textbf{bold}$, $\textit{sans}$, etc.),
4. a complete font change ($\texttt{setupbodyfont}$, $\texttt{switchtobodyfont}$).

I will briefly explain each of these.

2 Font styles
There are three types of font families: serif, sans serif, and teletype. To switch between these families, use $\textmd{rm}$ for serif, $\textsc{ss}$ for sans serif, and $\texttt{tt}$ for teletype.

Each of these families come in different styles: upright, bold, italic, slanted, bold-italic, bold-slanted, and small caps. To switch to a different style, use $\texttt{tf}$ for upright, $\texttt{bf}$ for bold, $\texttt{it}$ for italic, $\texttt{sl}$ for slanted, $\texttt{bi}$ for bold-italic, $\texttt{bs}$ for bold-slanted, and $\texttt{sc}$ for small-capped.

You can generally combine font families and font styles, so if you want to switch to bold sans serif, you can use either $\texttt{bfss}$ or $\texttt{ssbf}$.

There is a font switch $\texttt{em}$ to emphasize text.

This is somewhat special: it does automatic italic correction and changes the style depending on the current font style. For example, if the current font style is upright, \em switches to slanted; and if the current font style is slanted, \em switches to upright.

ConTeXt uses the Latin Modern fonts by default; these fonts look similar to the original Computer Modern fonts, but have a much larger character repertoire. As it happens, in the Latin Modern (and Computer Modern) fonts, the slanted font does not stand out from the upright font enough for some tastes; so, many people prefer to use the italic font for emphasis. To do that use

```latex
\texttt{definebodyfontenvironment[default][em=italic]}
```

A font switch remains valid for the rest of the group. So, if you want to temporarily switch to a different font, use the font style command inside a group. The easiest way to start a group is to enclose the text within braces (also called curly brackets), for example

```latex
This is serif text
\{\textsc{ss} This is sans serif\
\{\texttt{tt} and this is typewriter\}
```

which gives (notice the braces in the above lines)

This is serif text
This is sans serif
and this is typewriter

3 Font sizes
Occasionally one needs to change the font size. ConTeXt provides two series of commands for that. To increase the font you can use $\texttt{fa}$ to scale the font size by a factor of $1.2$, $\texttt{fb}$ to scale by a factor of $(1.2)^2 = 1.44$, $\texttt{fc}$ to scale by $(1.2)^3 = 1.728$ and $\texttt{fd}$ to scale by $(1.2)^4 = 2.074$.

To decrease the font size, you can use $\texttt{fx}$ to scale the font by a factor of $0.8$ and $\texttt{fxx}$ to scale by a factor of $0.6$. The scale factors can be a function of the current font size and can be changed by

```latex
\texttt{definebodyfontenvironment[10pt][a=1.2pt]}
```

For example, if you want $\texttt{fa}$ to be equal to 12pt when you are using 10pt font, and be equal to 14pt when you are using 11pt font, then add

```latex
\texttt{definebodyfontenvironment[10pt][a=12pt]}
```

The `\texttt{definebodyfontenvironment}` command is de-

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1 http://pragma-ade.com/show-man-1.htm
2 http://www.logosrl.it/context/modules/
scribed in detail in the ConT\TeX\t manual and the 
\texttt{font-initex} source file.

Font size can be combined with font styles. As
a shortcut, you can use \texttt{\textbackslash fa} to get bold font scaled
by 1.2, \texttt{\textbackslash fx} to get a bold font scaled by 0.8 and
similar commands for other font styles.

These font size switches are meant for changing
the font size of a few words: they do not change the
interlinespacing and math font sizes. So, if you want
to change the font size of an entire paragraph, use
\texttt{\textbackslash switchtobodyfont} described below in Section 5.
However, it is fine to use them as style directives in
setup commands, that is, using them as an option
for \texttt{style=}... in any setup command that accepts
the style option.

4 Alternative font styles

While learning a document markup language like
ConT\TeX\t, it can be hard to remember all the commands. ConT\TeX\t provides easy to remember alter-
native font styles. So for bold you can use \texttt{\textbackslash bold},
for italic you can use \texttt{\textbackslash italic}, for slanted you can
use \texttt{\textbackslash slanted}, and so on. You can probably guess
what the following do:

\begin{verbatim}
\normal  \slanted
\boldslanted  \slantedbold
\bolditalic  \italicbold
\small  \smallnormal
\smallbold  \smallslanted
\smallbolditalic  \smallitalicbold
\sans  \sansserif
\sansbold  \sanscaps
\end{verbatim}

In addition, the commands \texttt{\textbackslash smallbodyfont} and
\texttt{\textbackslash bigbodyfont} can be used to change the font size.

These alternative font styles are pretty smart.
You can either use them as font style switches inside
a group, or as a font changing command that takes
an argument. For example,

\begin{verbatim}
This is {\bold bold} and so is \bold{this}.
\end{verbatim}

gives

This is \textbf{bold} and so is \textit{this}.

These alternative font styles can also be used for all
\texttt{style=}... options, and while using them as style
options, you can just give the command name, for
example:

\begin{verbatim}
\setuphead[section][style=bold]
\end{verbatim}

5 Complete font change

If you need to change to a different font size
and take care of interline spacing, you can use
\texttt{\textbackslash switchtobodyfont}. For example, to switch to
12pt you can use \texttt{\textbackslash switchtobodyfont[12pt]}.

ConT\TeX\t provides two relative sizes, called ‘big’
and ‘small’. So, to go to a bigger font size, you
can use \texttt{\textbackslash switchtobodyfont[big]} and to go to a
smaller font size, \texttt{\textbackslash switchtobodyfont[small]}. The exact sizes that are used for big and small can be
set using \texttt{\definebodyfontenvironment}.

The \texttt{\textbackslash setupbodyfont} command accepts all the
same arguments as \texttt{\textbackslash switchtobodyfont}. The dif-
ference between the two is that \texttt{\textbackslash setupbodyfont}
also changes the font for headers, footers and other
page markings, while \texttt{\textbackslash switchtobodyfont} does not.
So you should use \texttt{\textbackslash setupbodyfont} for global font
definitions to apply to the whole document, and
\texttt{\textbackslash switchtobodyfont} for local font changes. The ef-
effect of \texttt{\textbackslash switchtobodyfont} can be localized within
a group as usual.

6 Different typefaces

So far we have discussed style and size changes
within a given typeface family. If you want to use
a different typeface altogether, such as Times or
Palatino, the Pragma web site has recipes covering
all the commonly available typefaces,\footnote{\url{http://pragma-ade.com/general/manuals/showfont.pdf}}
while a separate manual describes how to write support for new
typefaces.\footnote{\url{http://pragma-ade.com/general/manuals/mfonts.pdf}} (For the latter, see also Idris Hamid’s
article in this issue of \textit{TUGboat}.)

The recipes as given work with the standalone
ConT\TeX\t distribution, but not with T\TeX\ Live et
al.\footnote{\url{http://pragma-ade.com/general/technotes/ftmetrics.pdf}} To use the recipes with other distributions,
try adding one of \texttt{\usetypescript[berry][ec]} or
\texttt{\usetypescript[adobekb][ec]}.

7 Conclusion

There are many other ways of choosing font styles
in ConT\TeX\t. If these basic styles do not satisfy your
needs, have a look at the manual, or ask on the
ConT\TeX\t mailing list.\footnote{\url{http://wiki.contextgarden.net/ConTeXt_Mailing_Lists}}

\begin{itemize}
\item Aditya Mahajan
University of Michigan
adityam (at) umich dot edu
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